

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 19, 2002

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending April 19, 2002

Mr. Troan observed the AN Farm Primary Ventilation System Phase 2 Assessment and reviewed other tank farms issues. Messrs. Kasdorf, Tontodonato, Plaue, and Leary (Outside Expert) reviewed plutonium stabilization issues at the Plutonium Finishing Plant.

Plutonium Finishing Plant: Direct oxidation of polycubes began this week. (III-A)

Waste Treatment Plant: Past reports have discussed staff concerns with Bechtel National Inc.'s (BNI) design review process. At this week's Bi-Monthly Design Review of the Balance of Facilities, there was significantly more and broader participation by BNI's external reviewers than has been observed at prior reviews. Most of the presentations now include a section on open issues. Later this month, the staff will be reviewing some of the other design review process improvements BNI has made.

BNI also held a monthly project review this week. During this meeting BNI discussed a proposal submitted to the Office of River Protection (ORP) to revise the authorization basis (AB) development process. The current process was characterized as encompassing both commercial and safety risk and required continuous approval and modification of detailed AB documents resulting in increased cost and process delays with no benefit to worker or public safety. BNI stated the the current AB documents contain more detail than necessary and are not clear to which stage of the project AB requirements are applicable. The staff will review the suggested changes to the process BNI has proposed. (I-C)

Rec. 95-2: Mr. Sautman gave a presentation to Department of Energy - Richland (DOE-RL) senior managers on the implementation of Integrated Safety Management System (ISMS) throughout DOE and at Hanford. This was timely since DOE-RL is considering changes to how they perform their annual ISMS update and oversee the contractor's performance. (I-C)

T-Plant: During the recent operational readiness review questions regarding the design calculation of the spent fuel grapple to be used to transfer fuel which limited its design capacity. Subsequently, Mr. Grover reviewed this calculation and identified additional calculation errors and the omission of preload forces in determining the stresses for cap screws which are the limiting component in determining the design capacity. This preload results in stresses exceeding the allowable stresses required by the T-Plant AB. Mr. Grover also questioned whether the bolts, as the weakest link in the design, were specifically examined following the load testing of the grapple. The revised design calculation addressing the calculation errors appears to still contain several non-conservative assumptions which make it unclear whether the grapple provides the margin of safety required by the AB. (III-A)

cc: Board Members